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BANKS LAKE RECREATION

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HEARING BEFORE THE SUBCOMMITTEE ON WATER AND POWER RESOURCES OF THE

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

NINETIETH CONGRESS

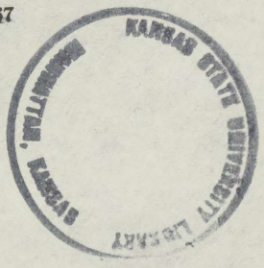
FIRST SESSION

ON

S. 605

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO DETERMINE THAT CERTAIN COSTS OF OPERATING AND MAINTAINING BANKS LAKE ON THE COLUMBIA BASIN PROJECT FOR RECREATIONAL PURPOSES ARE NONREIMBURSABLE

FEBRUARY 23, 1967



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BANKS LAKE RECREATION

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BANKS LAKE RECREATION

THURSDAY, FEBRUARY 23, 1967

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER OF THE
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:30 a.m. in room 3110, New Senate Office Building, Senator Henry M. Jackson presiding.

Present: Senators Jackson, Moss, Allott, and Jordan of Idaho.

Also present: Senator Hatfield.

Staff members present: Jerry T. Verkler, staff director; Stewart French, chief counsel; Roy Whitacre, professional staff member; William J. Van Ness, special counsel.

Senator JACKSON. This is an open public hearing on S. 605, a bill which would authorize the Secretary of the Interior to determine that certain costs of operating and maintaining Banks Lake on the Columbia Basin project for recreational purposes are nonreimbursable.

This bill was introduced by myself and my senior colleague from the State of Washington, Senator Magnuson.

Banks Lake, as you know, is an equalizing reservoir on the Columbia Basin project. Under the original authorization and at present, the lake is operated for purposes of irrigation alone. As a result, the water level is subject to periodic surges and fluctuations. These fluctuations increase during the summer season and have the effect of making the use of the lake for recreational purposes very difficult, if not impossible.

The purpose of the bill is to permit the Secretary of the Interior to determine that certain costs related to pumping water to stabilize the lake's level are nonreimbursable. The Department's report estimates that these costs would average about \$21,000 per year. The recreational benefits which would accrue are estimated at \$60,000 per year.

Banks Lake is an important recreational resource in my State. In addition to being an excellent area for fish and wildlife, it is a popular recreational area that is used by residents from all over the State when water level conditions permit.

In view of the small cost involved, the uniqueness of the situation, and the desire of people in my State to enjoy the full benefits of Banks Lake, I hope the committee will report and the Congress approve S. 605 as an interim measure to enhance recreational opportunities and use of Banks Lake.

Without objection, the text of the bill, together with the executive reports, will be printed at this point in the record.

(The data referred to follow:)

[S. 605, 90th Cong., 1st sess.]

A BILL To authorize the Secretary of the Interior to determine that certain costs of operating and maintaining Banks Lake on the Columbia Basin project for recreational purposes are nonreimbursable

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That pending additional development of the Columbia Basin project, Washington, the Secretary of the Interior is authorized, when estimated added benefits will at least equal added costs, to operate and maintain Banks Lake of said project for recreational purposes consistent with authorized project functions, valid contracts, and within limits of pump and canal capacities, and that any increased operation and maintenance costs for filling of Banks Lake and for maintaining water levels for the benefit of recreational purposes, including fishing and hunting, as determined by the Secretary of the Interior shall be nonreimbursable and nonreturnable: *Provided,* That the provisions of this Act shall not extend beyond the end of the sixth calendar year following the date of enactment.

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., February 21, 1967.

HON. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR SENATOR JACKSON: This responds to your request for the views of this Department on S. 605, a bill "To authorize the Secretary of the Interior to determine that certain costs of operating and maintaining Banks Lake on the Columbia Basin project for recreational purposes are nonreimbursable."

We recommended the enactment of the bill.

S. 605, which is identical to S. 2310, 89th Congress, authorizes the Secretary of the Interior, pending completion of the Columbia Basin project, to operate and maintain Banks Lake, of the Columbia Basin project, for the purpose of recreation as well as presently authorized project purposes for a period not to exceed 6 years. The bill imposes certain qualifications on such operation, namely, that estimated additional benefits from operation for recreational purposes shall at least equal the added cost attributable to such operation, and that operation shall be consistent with other authorized project functions, valid contracts, and within the limits of pump and canal capacities. The increased operation and maintenance costs incurred in filling the reservoir and maintaining water levels for recreation, including fishing and hunting, are made nonreimbursable by the bill.

S. 605 would provide a means to increase the recreational benefits of the Columbia Basin project during an interim period prior to full development of the irrigation and power features of that project. It would make use of electric energy at times and in quantities which would not impair normal project operation or contractual obligations and would provide benefits in some years equal to nearly three times the cost. This action would be consistent with the Department's position in the past when it has supported similar bills that included Federal assistance for recreation at Banks Lake.

Banks Lake, which is 27 miles long, is an equalizing reservoir of the Columbia Basin project. It is at a higher elevation than Franklin D. Roosevelt Lake behind Grand Coulee Dam, and it is filled by pumping from the mainstream reservoir. As Banks Lake is now operated for irrigation alone, the water level is subject to fluctuations, particularly during the summer season, making it undesirable from the standpoint of recreation uses. Stabilization of water levels in Banks Lake would enhance most recreational uses of the area, and would be especially beneficial for the more effective utilization of existing and planned facilities at Coulee City adjacent to Dry Falls Dam. These include bathing beaches and small boat moorings.

Our studies of the project water supplies from the Columbia River indicate that with normal streamflow, operating conditions should permit some additional pumping to reduce reservoir fluctuations in four of the next six years. During the remaining 2 years, 1969 and 1973, plans call for the lowering of Franklin D. Roosevelt Lake in connection with construction activities for the third powerplant at Grand Coulee Dam. It will then be necessary to use all pumping capacity to fill Banks Lake for irrigation, and recreational interests will need to adjust to fluctuating water levels. Floating docks, longer boat ramps, and other features can be used to mitigate the detrimental effects to recreation from fluctuating water levels.

Under the provisions of S. 605 the Department expects that added pumping costs in the 4 years when such operations would be feasible would average about \$21,000 per year. In these years, the added recreational benefits are estimated at \$60,000 annually. Should streamflows be low during any of these 4 years, there would be little, if any, opportunity to pump water for recreation. Hence, there would be no benefits and little or no added cost.

The proposed plan contemplates that a pumping plant, presently operated by the Federal Government only for irrigation purposes, will be operated more frequently to serve an additional purpose—recreation. This can be done only for a few years—until more extensive development of the Columbia River system renders it impractical. During this short period it will be almost impossible to predict, with any certainty, the extent to which the project can be operated at any given time for the recreation purposes already described. This unpredictability would, in turn, make it virtually impossible for any non-Federal agency interested in the recreation potential of the project to attempt to recover the costs of its operations from user fees or other methods of self-help financing. The Federal Government is the only agency which has a broad enough base to pick up these expenses on those fortuitous occasions when the project can be operated for recreation purposes.

We do not anticipate that the treatment which we recommend here is of a recurring type. The action which we recommend on this bill is consistent with the position taken earlier by the Department on S. 2310 of the 89th Congress.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

CHARLES F. LUCE,
Under Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., February 24, 1967.

HON. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your letter of January 26, 1967, requesting the views of the Bureau of the Budget on S. 605, a bill "To authorize the Secretary of the Interior to determine that certain costs of operating and maintaining Banks Lake on the Columbia Basin project for recreational purposes are nonreimbursable."

As we noted in our letter to you of July 29, 1965, commenting on similar legislation the costs proposed to be considered nonreimbursable are operation and maintenance costs, and should normally be borne by non-Federal interests under the provisions of the Federal Water Project Recreation Act. However, we consider the facilities in question, namely, the pumps, to be physically inseparable from the Federal project for operational purposes, subject, of course, to appropriate contracts with irrigators. As we indicated in the section-by-section analysis which we submitted with a draft of the above-cited Act we would not expect non-Federal interests to bear operation and maintenance costs of such physically inseparable works as contemplated in S. 605.

We would expect, however, that the entire situation would be reviewed and reconsidered in connection with the Department of the Interior's study of the recreation and fish and wildlife aspects of the Columbia Basin project.

Accordingly, we would have no objection to enactment of S. 605 as an interim measure pending the development of a plan for recreation in the Columbia Basin.

Sincerely yours,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

Senator JACKSON. This measure has been favorably considered by this committee and by the Senate in previous sessions of Congress. Hearings on a bill similar to S. 605 were held in the 88th and 89th Congresses. The bill was passed by the Senate in the 88th Congress, but no action was taken by the House.

The hearings from the 88th and 89th Congresses on this bill will be incorporated, by reference, into the record of these hearings. Those hearings set forth statements and communications from officials and local people from the State who are concerned with the situation on Banks Lake. The statements explain the need for the legislation and contain statements endorsing this measure.

Also submitted for the record is a statement by my colleague from the State of Washington, Senator Magnuson, on this legislation. It will be included in the hearing record at this point.

(The statement referred to follows:)

STATEMENT OF HON. WARREN G. MAGNUSON, A U.S. SENATOR FROM THE STATE OF WASHINGTON

Mr. Chairman: I appreciate the opportunity to present a statement in support of S. 605, a bill co-sponsored by Senator Jackson and myself. The bill would authorize the Secretary of the Interior to determine that certain costs of operating and maintaining Banks Lake on the Columbia Basin Project for recreational purposes are nonreimbursable.

Banks Lake is technically the equalizing reservoir of the Columbia Basin Project, created and maintained by the Bureau of Reclamation for irrigation purposes. It stands at a higher elevation than Franklin D. Roosevelt Lake behind Grand Coulee Dam and is filled by pumping from the mainstream reservoir. But Banks Lake is more than just another equalizing reservoir. It represents the return of water after thousands of years to the Grand Coulee. It is a lake which fills much of the floor of the Grand Coulee, through which the Columbia River once flowed when great ice caps blocked its normal channel. Before the creation of Banks Lake, nothing but sagebrush and a few swamps lay between the tall walls of this geological phenomenon.

We now have a lake which, though operated for irrigation alone, has tremendous potential for other multiple uses.

It is already considered one of the finest fishing lakes in the State of Washington and has attracted thousands of sportsmen from throughout the Pacific Northwest. But the full development of Banks Lake has been thwarted by fluctuations in the water level. These fluctuations range between 8 and 14 feet, particularly during the summer season. Stabilization of the water level would, without doubt, permit Banks Lake to become one of the most popular recreational lakes in the State of Washington.

Banks Lake is unique in its physical location on the floor of the Grand Coulee. Yet its proximity to the mighty Grand Coulee Dam lends even more credence to a demand for full recreational development. Thousands of tourists visit the Dam each year, many of whom welcome the opportunity to spend a day or two fishing or boating on Banks Lake.

The Bureau of Reclamation has indicated that in 3 or 4 of the next 6 years operating conditions at the pumping plant will permit some additional pumping, reducing reservoir fluctuations. During this period the benefits of such pumping is expected to equal or exceed the annual costs of the added pumping.

The bill is limited to a period of 6 years because this service to recreational purposes will no longer be feasible when a third powerhouse at Grand Coulee Dam becomes operational. Thus, the remaining 2 or 3 years of the 6 year period would be used by the recreational interests for adjustment to fluctuating levels by preparing floating docks, longer boat ramps, and other flexible features.

I noted that in your hearings on this matter in the 89th Congress, some members of the Subcommittee were concerned with the temporary nature of the bill. I would like to point out, however, that not only will the recreational benefits outweigh the additional costs to the Federal government during this period, but they will also permit recreational interests to amortize their own additional costs of meeting the problems of a fluctuating water level.

We have only a few short years to take advantage of the pumps and excess water at Grand Coulee Dam. Let us not fail to provide the utmost utilization of Banks Lake while we still have an opportunity to do so. I urge the favorable action by the Subcommittee.

Mr. JACKSON. Also I have a statement from Congressman Foley, whose district borders this project and would benefit from the stabilization of Banks Lake for recreational purposes.

(The statement referred to follows:)

STATEMENT OF HON. THOMAS S. FOLEY, A U.S. REPRESENTATIVE IN CONGRESS
FROM THE FIFTH DISTRICT OF THE STATE OF WASHINGTON

Mr. Chairman, I very much appreciate the opportunity to present to this distinguished subcommittee my views on S. 605, a bill to authorize the Secretary of the Interior to determine that certain costs of operating and maintaining Banks Lake on the Columbia Basin project for recreational purposes are non-reimbursable.

Witnesses of the Department of the Interior, I am sure, will present full technical information on the operation of Grand Coulee Dam, its pumping plant and the equalizing reservoir, Banks Lake. Since my congressional district adjoins Banks Lake, I would like to offer information about the recreation aspects of this body of water.

The lake is actually an equalizing reservoir, into which is pumped waters from behind Grand Coulee Dam, waters ultimately to flow southward to the lands of the Columbia Basin project.

Creation of the lake brought an unexpectedly heavy recreation usage. Tens of thousands of persons have come to the lakes to indulge in fishing, swimming, boating, water skiing, other water sports. In short, Banks Lake became an extraordinary success as a recreation site, particularly because it is a large body of water in an arid area, blessed with an abundance of summer sun.

The natural result has been the installation of boat launching facilities, picnic sites, and other recreation-oriented developments.

However the fact that the lake is an equalizing reservoir works a natural hardship on its recreation aspect, due to the frequent changes in water elevation.

Frequent drawdowns cause unsightly shoreline conditions, leave boat docks and launching ramps distant from the water and, in other ways, impair recreation.

S. 605 would authorize the Secretary of the Interior to operate and maintain Banks Lake for purposes of recreation, in addition to its presently authorized purposes, for a period not to exceed 6 years. Wisely, it prescribes that estimated additional benefits from the recreation operation should at least equal the costs of the additional pumping and other costs involved in maintaining an elevation suitable for recreation.

I have seen estimates that the benefits from such an operation would be around \$60,000 per year, or approximately three times the anticipated cost. I would venture the opinion that this estimate of benefits is not excessive, but in fact may be very conservative, particularly in view of the sharply rising trend of recreation in the Pacific Northwest.

The 6-year period mentioned in the language of the bill indicates that this is an interim proposal, to serve the purposes of recreation until completion of a thorough study of the Columbia Basin project upon which can be based a new structure for allocating project costs among all functions, including recreation, being served by the project.

It is a pleasure for me to support S. 605.

Senator JACKSON. Congresswoman May of the State of Washington has also submitted a statement for the record.

(The statement referred to follows:)

STATEMENT OF HONORABLE CATHERINE MAY, A U.S. REPRESENTATIVE IN
CONGRESS FROM THE STATE OF WASHINGTON

Mr. Chairman: It is a pleasure to present before this distinguished Committee a statement in support of S. 605.

This bill would authorize the Secretary of the Interior to operate and maintain Banks Lake on the Columbia Basin project in a manner which would enhance recreational development and purposes.

Except for the wide fluctuations in the level of this 27-mile long lake during the summer season, this fine body of water would be an outstanding recreation facility. The Bureau of Reclamation, however, presently operates this equaliz-

ing reservoir for reclamation purposes only, as was consistent with the original authorizing legislation for the Grand Coulee Dam project.

The bill before you today would correct this situation in the years immediately ahead. It is estimated that during four of the next six years, through a pumping procedure, benefits to recreation will exceed costs in stabilizing the lake.

Later, as the full potential of the Grand Coulee Dam project is brought into being, such pumping will not, according to the Bureau of Reclamation, continue to be economically feasible. Enactment of this bill will, however, provide local interests with the time necessary to develop facilities such as floating docks, long boat ramps, and other devices to help offset heavy fluctuations in water levels during those future years.

I might say, Mr. Chairman, that I have conferred with community leaders and recreation interests in the Banks Lake vicinity on a number of occasions, and I have discussed the recognized need for this kind of a solution to the fluctuation problem with officials of the Bureau of Reclamation on many occasions. In addition, in previous Congresses, I have sponsored legislation similar to S. 605 in the House of Representatives.

I am pleased this hearing is being held early in the new Congress, and I am hopeful this long-sought solution to a situation that needs attention, will receive your favorable action.

Thank you.

Senator JACKSON. As our first witness, we have Mr. Dominy, Commissioner of the Bureau of Reclamation.

**STATEMENT OF FLOYD E. DOMINY, COMMISSIONER OF THE
BUREAU OF RECLAMATION; ACCOMPANIED BY HAROLD T.
NELSON, REGIONAL DIRECTOR**

Mr. DOMINY. I have Mr. Nelson here with me to help present testimony this morning.

Mr. Chairman, S. 605 would authorize the Secretary of the Interior, for a period of 6 years, to determine that certain costs of operating and maintaining Banks Lake for recreation purposes are nonreimbursable. Qualifications imposed by the bill are that the estimated additional recreational benefits shall, at least, equal the added costs and that the operation shall be consistent with authorized project functions, valid contracts, and within limits of pump and canal capacities. This bill is intended as an interim arrangement pending more complete development of the Columbia Basin project and possible future legislation authorizing reallocation of project costs to recognize recreation as a project function. A study of the Columbia Basin project, reflecting all features and functions of the existing project and the proposed extensions, is underway. It is expected that the completed study will demonstrate the justification for including recreation and fish and wildlife enhancement as project purposes, and also will provide a basis for allocation of project costs among all functions to be served.

The committee is familiar with the details of the Columbia Basin project. To save your time, there is attached to my statement a reprint from our project data book which describes the project features, reviews the early history, authorization, construction, project purposes and benefits, and includes a small map showing the location of Banks Lake and other project features. Updating information on irrigation development and power operation are attached to some tables on page 7 of that.

PRESENT CONDITIONS

Banks Lake has an active storage capacity of about 700,000 acre-feet. Water from Roosevelt Lake is pumped into Banks Lake. The average pump lift is 300 feet. In the interest of keeping irrigation operation and maintenance costs as low as possible, pumping into Banks Lake is done to the greatest extent possible when low value secondary energy is available for pumping and when water levels in Roosevelt Lake are high. Releases from Banks Lake are made as needed for project irrigation. Thus, Banks Lake serves as a necessary equalizing or reregulating reservoir for the irrigation. During the next 6 years, approximately 2½ million acre-feet of water will be pumped into Banks Lake annually. This quantity of water is 3½ times the active storage capacity of Banks Lake.

Irrigation withdrawals from Banks Lake normally begin in late March and the reservoir gradually recedes to about elevation 1,546 feet above sea level. Pumping to Banks Lake usually begins about mid-April, but is at a reduced rate because of limited available secondary power because our power requirements are coordinated with Bonneville Power Administration and their sales requirements, and also we had a low water level in Franklin D. Roosevelt Lake, at that time. The lake level rises to a maximum elevation between 1,568 and 1,570 feet by the end of August when pumping to Banks Lake is reduced or discontinued (depending upon other power requirements). The water level in Banks Lake gradually declines until the end of the irrigation season because of irrigation withdrawals. The water level then remains nearly constant at about 1,554 feet elevation during the nonirrigation season.

The increased use of Banks Lake for recreation in recent years has led to requests from representatives of recreational interest for the Bureau of Reclamation to reduce, or to eliminate entirely, the water level fluctuations that occur at Banks Lake.

Recreation uses of Banks Lake consist of picnicking, camping, fishing from the shore and from boats, hunting, boating, swimming, and waterskiing. The towns of Electric City (population 404), Grand Coulee (population 1,058), Coulee Dam (population 1,344), and Elmer City (population 265) are situated at the north end of the lake. The town of Coulee City (population 654) is near the south end of Banks Lake. There are, of course, a great many tourists who visit the area to see Grand Coulee Dam. Banks Lake has about 150,000 recreation visitor days annually. Nearly half of the visitors are hunters and anglers, and about half are general recreation. It has been estimated that with a higher and less fluctuating water surface elevation, the benefits attributable to increased uses of the reservoir and increased fishing would amount to \$60,000 a year.

Higher water levels if maintained throughout the year would add materially to the operating costs of the project, however, largely because it would be necessary to use firm power for spring and fall pumping. At this time there is no provision to assign the incremental cost of pumping for recreational purposes to other than the project water users. The amount of the additional costs would depend upon the extent that the reservoir operations were modified. Studies indicate that under average streamflow conditions on the Columbia River, the annual added costs to limit fluctuations to about 5 feet

would amount to approximately \$21,000 and, of course, we could do this only when water supply conditions would permit and without interference to salable energy. There would not be any guarantee that we could do it every year.

In years of low streamflows, there would be little, if any, opportunity to pump additional water for recreation. The limited size of the pumping plant and the limited storage capacity of Banks Lake would prevent, or at least severely limit, complete stabilization of the reservoir level in many years.

We do not believe it is proper or consistent with longstanding policy to include costs of pumping for recreational use in the Government's water charges to the irrigation districts. The allocation of a firm block of project power to pump solely for recreation purposes, as has been suggested by some, is not consistent with the authorized functions of the project. The financing of added pumping costs by local recreational organizations would be difficult to justify during the next 6 years because of the uncertainty now of predicting the years in which governing criteria would permit operation to obtain benefits at least equal to costs. Moreover, it would be difficult to find an organization that could represent, and in turn pass on charges to, the various beneficiaries. Also, the extent of lake-level stabilization that could be accomplished would have a direct effect on the amount of income which could be derived from admittance charges or use charges levied against those using the recreational facilities.

BENEFITS FROM MODIFIED OPERATIONS

Several enlargements and modifications of project features are planned that would affect the long-term operation of the Columbia Basin project and of Banks Lake. These include installation of the third powerplant at Grand Coulee Dam, installation of reversible pump generation units at Grand Coulee pumping plant which pumps the water into Banks Lake, the construction of upstream reservoirs in Canada as permitted under the Columbia River compact of 1965, and the ultimate extension of irrigation facilities to increase the irrigated area from about $\frac{1}{2}$ million acres presently served to over 1 million acres ultimately. Construction activities presently scheduled at Grand Coulee Dam will cause unusual operations at the Franklin D. Roosevelt Lake and at Banks Lake. The construction schedule for the third powerplant will require lowering Franklin D. Roosevelt Lake to at least or possibly below elevation 1,240 feet in the spring of 1968 for construction of a cofferdam. Franklin D. Roosevelt Lake will be drawn below elevation 1,170 feet for at least 60 days in the spring of 1969 to provide for excavation of the approach channel to the forebay upstream from the cofferdam. In the spring of 1973, the Franklin D. Roosevelt Lake will again be drawn down below elevation 1,170 feet for removal of the cofferdam and to complete the forebay excavation. The drawdown in the spring of 1968 would not prevent pumping for recreation purposes if other conditions, such as water supply and availability of surplus power permit pumping. The drawdowns in 1969 and 1973 will delay the refilling of Banks Lake because Franklin D. Roosevelt Lake must be above elevation 1,208 feet before we can pump into Banks Lake. Pumping, therefore

would be delayed, and all pumping capacity would be needed to refill Banks Lake for irrigation.

Under these conditions it would not be possible to accelerate the filling for recreational purposes. There are six pumps at the Grand Coulee pumping plant now to pump water from Franklin D. Roosevelt Lake to Banks Lake. Twelve pumps will be required eventually to serve the million-acre Columbia Basin project. These pumps are installed in stages and the next units, pumps 7 and 8, will be reversible and will operate either as pumping units or as generating units. The power generated by these units will be used for peaking loads. Banks Lake needs to be nearly full for peak power production—approximately elevation 1,568 feet. Installation of units P-7 and P-8 is scheduled in 1971. Banks Lake will be filled for peaking power production in the fall of 1971 and each fall thereafter.

It appears, because of the special requirements for the operation of Franklin D. Roosevelt Lake and Banks Lake, there probably would be only 4 years during the next 6-year period when operating conditions would be such that it would be justified to modify reservoir operations in order to specifically benefit recreation. These years are 1968, 1970, 1971, and 1972. This assumes average streamflows and that pumping would be justified only if the added costs were not chargeable to irrigation. During these years, the reduction in reservoir fluctuations from a range of approximately 23 to about 5 feet would provide added recreational benefits, estimated to average \$60,000 per year. The average added annual operating cost for this purpose is estimated to be \$21,000, giving an overall benefit-cost ratio of 2.86 to 1.00. Little or no added costs would accrue if commitments for power production and delivery of water for irrigation would not permit pumping for recreation.

As I mentioned earlier, a comprehensive study of operations and multiple benefits of the entire Columbia Basin project is now underway. This investigation among other things will evaluate the costs and benefits of providing larger, assured water supplies to accomplish fish and wildlife and recreation purposes at various facilities over the project, including Banks Lake. Enactment of S. 605 will create increased recreation opportunities at Banks Lake during the interim period required to study and consider legislation to reallocate project costs so as to recognize recreation as a future project.

We have no objection to this measure provided the costs, of course, are not loaded on to the irrigation farmers.

Senator JACKSON. Banks Lake is a very large lake, is it not?

Mr. DOMINY. Yes. It is 27 miles long, and varies from a half mile to 2 or 3 miles wide.

Senator JACKSON. And it is located in the old Coulee which is the old course of the Columbia River, is it not?

Mr. DOMINY. Yes. It is now a lake. It is unusual in that we have put a dam at both ends of it to form the lake.

Senator JACKSON. That is right.

Senator Allott?

Senator ALLOTT. Well, I am trying to get at the objective of this bill. I have a feeling that this is not quite within the lines of what we call reclamation.

Mr. DOMINY. Well, it is an effort to recognize the tremendous recreational benefits that do accrue from our reclamation facilities, and to

provide a better habitat for recreation than would normally be true under ordinary operations. I would like Mr. Nelson to go to the map and——

Senator ALLOTT. That is all right, I would like to have him there, but much of your statement was devoted to the fact that in many of these years it is impractical for recreation without added costs. Who are you going to put these costs on?

Mr. DOMINY. Well, the years we do not do it, there would be no costs and the years we do do it, there are the benefits.

Senator ALLOTT. All right. Who is going to pay the added costs?

Mr. DOMINY. It would be a Federal nonreimbursable expenditure because it is not possible and practicable to carry it down to the direct user and collect it.

Mr. NELSON. Senator Allott, if I may very quickly refer to this diagrammatical sketch, the lake, 27 miles long, serves as both an equalizing reservoir and a canal, so a great deal more water passes through the lake than the capacity of the lake. The lake is 700,000 acre-feet and in a year, two and a half million acre-feet must be pumped.

Now, the blue line on the top is the normal elevation of Banks Lake through an average year from September to August and the lower blue line is the corresponding elevation of Roosevelt Lake behind Grand Coulee Dam.

The project must be operated now in accordance with the authorized functions of irrigation, power, and flood control. So the way the operation is conducted now is as follows: Sometime about the 20th of April it is necessary to start pumping from Roosevelt Lake into Banks Lake and start building up the level of Banks Lake, and in addition, pass water through it, so that at the end of August the lake is full, and it is then possible to stop pumping.

Now this is the period when there is surplus power available for pumping generally and the irrigation operations completely satisfied. At the end of August, then the irrigation season is still on, so Banks Lake is drawn down, using that accumulated storage for the rest of the crop year, because here at that point in September is when the systemwide power operations require the use of storage from Roosevelt Lake because the natural flow of the Columbia River has dropped down.

So under the terms of this bill, it is desirable from a recreation standpoint to have the level of Banks Lake reasonably full from about the first of May on, rather than in August. So in order to accomplish having it up within a couple of feet of being full, it is necessary to move the period of pumping from April back into March in order to pump this extra amount of water to have the level at about 1,562 feet.

Then, when irrigation requirements take over, the lake level will remain substantially full during the months of May, June, July, and August, and this is accomplished, by the way, in such a way that there is not interference with firm power production pumped during the night and other times but there would be an additional cost to the irrigators to do this because the pumps have to be run a longer period of time. There is operation and maintenance, wear and tear.

Also, there is additional evaporation loss and seepage loss, and so on. But essentially the \$21,000 comes from moving up the pumping from about April 20 to about March 20. But it does enable us to keep the lake essentially full through the summer recreation season.

Senator ALLOTT. Well, I can see the advisability of this from a recreational standpoint. The real question that I am interested in is that none of this loading comes on the irrigation.

Mr. DOMINY. Yes. This bill so provides. It makes it nonreimbursable.

Senator JACKSON. Well, we have been approving a number of projects, have we not, allowing for recreation on a nonreimbursable basis?

Mr. DOMINY. That is correct, where it is a joint facility as contrasted to a separate facility, as a general rule.

Senator ALLOTT. What we are in effect doing here is taking the project and adding a recreation to it as a nonreimbursable benefit. So there is no reason if we do this why we should not take all of our recreation projects in the West which have not had a significant amount assigned to them for recreation and reworking them all and having the Federal Government assume the responsibility for recreational development as a nonreimbursable asset.

Mr. DOMINY. Well, what we are really doing here——

Senator ALLOTT. No; I want an answer to this question.

Mr. DOMINY. Yes. I would say this is not quite so broad, Senator. In the first place it is limited to 6 years and our testimony indicates probably only 4 of the 6 that we would actually do it where there would be any costs and any benefits because of other limiting factors. And meanwhile, we are studying the whole Columbia Basin project on a more modern basis, recognizing all of the multiple purposes that it actually serves which were not considered when this project was authorized and built. And we will be back with a modern allocation report consistent with the rules and administrative practices that Congress has been following in recent years with regard to recreation.

Senator ALLOTT. Well, I am aware of those, Mr. Dominy. I think I attend most of these meetings.

Mr. DOMINY. You do.

Senator ALLOTT. And I am aware of those, but you are under no misapprehension that having done this for 6 years, this is going to be the end of this, and that you are going to be able to chop this off at the end of 6 years, are you?

Mr. DOMINY. I think that is a very appropriate statement.

Senator ALLOTT. So if that is true, then we have established a principle and there is no reason why we should not all, in the West, then, reassess all of our reclamation projects with the idea of having the Government pick up the tab as a nonreimbursable item for the expansion of our recreational purposes.

Mr. DOMINY. I am sorry. I was talking with the staff, Senator, and I did not get the question.

Senator ALLOTT. I will try to put it again. Based upon your answer, that you were not under a misapprehension that if this were done, it would not cease in 6 years, you have therefore, established a principle and therefore, there is no reason why anyone in the West who has reclamation projects should not start reassessing those projects with the idea that they will add recreational aspects the cost of which will then be picked up by the Government as a nonreimbursable item.

Mr. DOMINY. Well, of course, the final decision on this will rest with Congress. We are going to present as soon as we can a revised

reallocation report for this big important project which will analyze the recreational use and benefits and will, I am sure, comport those with the most recent expression of Congress in the recreational acts and water use acts that you passed in recent years.

Now, how Banks Lake will be treated within the context of the whole recreational package in this project area, I cannot say at this time.

Senator JACKSON. Is there not a need here to clarify one thing, and that is that what we are talking about here is an allocation of costs and operating and maintenance it is my understanding that there has been a chargeoff on construction costs.

Mr. DOMINY. This is right.

Senator JACKSON. As it pertains to recreation.

Mr. DOMINY. This is right only as it relates to \$177,000 for spillway flood lighting, if that is considered a recreation item.

Senator JACKSON. So we are dealing with a separate situation here in connection with the operation and maintenance of the project.

Mr. DOMINY. This is correct.

Senator JACKSON. I just wanted to make that distinction.

Senator ALLOTT. I think that is true, but I would still like to have Mr. Dominy answer my question. I do not think you have answered it.

Mr. DOMINY. I do not think I can precisely. I agree with you, that if we start this, that this is a strong precedent, then, to try to continue it. And I am sure the local people—

Senator JACKSON. In connection with the operation and maintenance of a project?

Senator ALLOTT. Of all projects.

Senator JACKSON. Yes, that is right. Insofar as the operation and maintenance is concerned. Of course, the other question is whether or not there should be a chargeoff on actual construction and the initial capital investment in a project. My understanding is, of course, that on some of the Corps of Engineer projects, multiple purpose projects, flood control, navigation and so forth and, that they have charged off recreation, have they not?

Mr. DOMINY. This is correct, and if we were presenting this project today—

Senator ALLOTT. We have done this with reclamation projects.

Senator JACKSON. That is right, but I mentioned reclamation earlier.

Senator ALLOTT. But this is a project which is completed.

Senator JACKSON. That is right.

Senator MOSS. And that is the reason it is being confined to an added cost of O. & M. My only question is can you calculate the additional costs that will be incurred by reason of this exactly so that they can be segregated without any question as to what are added costs to maintain the level of that lake?

Mr. DOMINY. Yes. And this is where we arrive at our \$21,000. If we pump under that normal schedule, we are pumping during the high flows in the river, the snow-melt period, and we do have more cheaper energy available at that time. If we move it up a little earlier we do have to pay more for the energy. We are using energy that is a little more costly because it would be sold by Bonneville for other purposes at a higher rate.

Senator JACKSON. Senator Moss?

Senator MOSS. No questions.

Senator JACKSON. Senator Hatfield?

Senator HATFIELD. Mr. Chairman, I respect Senator Allott's inquiry here on the basis of principle as it relates to the entire West but I would like to be a little more specific. Under the precedent established here what projects would qualify in Oregon?

Mr. DOMINY. Well, I cannot answer that off the cuff but I will be glad to—

Senator HATFIELD. Will you give me a memorandum on that?

Mr. DOMINY. I will be glad to give you a letter on it as to whether there are any projects of a similar nature.

Senator ALLOTT. You might include Colorado in that, too.

Senator JACKSON. Why don't you include all of us?

Mr. DOMINY. We will be very happy to address a letter to the chairman and members of this committee directed to whether we have similar situations.

Senator MOSS. This is a little bit unique. We do not have very many places where we actually pump water into a reregulated reservoir.

Mr. DOMINY. That is right.

Senator MOSS. And others might store the water a little longer before letdown and there might be a little added burden on the water users for that reason, but I do not think of very many where we have to pay out money for pumping.

Senator JACKSON. As I recall, each pump has a capacity of supplying water equivalent to the 24-hour needs of New York City. Is that correct?

Mr. NELSON. Yes. Six pumps now can pump 8,000 second-feet, which is 16,000 acre-feet a day, and that is right. One pump would almost supply New York City.

Senator JACKSON. I said one pump alone.

Mr. DOMINY. Yes. One pump alone can do that.

Senator JACKSON. These pumps are fantastic.

Senator JORDAN?

Senator JORDAN. Yes. I would like to correct the record. Mr. Dominy, on page 5 of your statement you speak about construction of upstream reservoirs in Canada as permitted under the Columbia River compact. You mean treaty, do you not?

Mr. DOMINY. Yes, Columbia River Treaty.

Senator JORDAN. All right. Now, what is the cost of the low-grade secondary power which is presently used for pumping water from Roosevelt Lake to Banks Lake?

Mr. NELSON. The allocation for project pumping is one-half mill.

Senator JORDAN. One-half mill per kilowatt-hour?

Mr. NELSON. Right.

Senator JORDAN. When we appropriated for the California intertie, presumably to make a market for this secondary power, what did that do to the half-mill pumping price from Roosevelt Lake to Banks Lake? Did it have grandfather rights to this half mill even though a market were available for this secondary project at a higher figure?

Mr. DOMINY. Yes, because the project that was originally authorized was an irrigation project and power was secondary and the irrigation rights are protected and will be protected.

Senator JORDAN. So that half-mill rate will obtain even when the intertie is moving secondary power into California at a higher price?

Mr. DOMINY. That is right.

Senator JORDAN. Well, now, in the event prime power is used for this pumping, what will be the cost of that prime power?

Mr. DOMINY. While you will not pay any more for the power, you use more power starting earlier to pump and you will cut down on your revenues. We would not use any prime power but would cut down on the revenues.

Senator JORDAN. What I am asking is, will the power that is used for the recreation part of the pumping cost be at a half a mill?

Mr. DOMINY. Yes. Mr. Nelson says as long as we are pumping into Banks Lake, still for irrigation purposes, we are just pumping earlier and a little longer, it would still be at that rate.

Senator JORDAN. Now, is that a realistic rate for recreation pumping, half a mill per kilowatt-hour?

Mr. NELSON. Yes, it is, Senator, because the pumping, when it takes place under terms of this bill, will take place from power that will not be salable on the Bonneville system.

Senator JORDAN. Yes.

Mr. NELSON. However, there will be about 25 million kilowatt-hours of energy that will appear on our meters and at the half-mill rate it would be worth about \$9,000 a year. But there really would not be an interference with Bonneville salable, either firm or secondary.

Senator JORDAN. Well, would it not be more realistic to put this additional power cost assignable to recreation in at an actual cost rather than at a cost of a half mill a kilowatt-hour, which is a variable rate indeed?

Mr. NELSON. Sir, the half mill was arrived at as being actual cost of energy at the dam, taking into account, of course, the irrigation allocation. That is not a subsidized rate. That is a rate that is equivalent to cost at the generator or point of takeoff. It does not go through the switchyards.

Senator JORDAN. That is right. It was equitable at the time it was established for the purpose for which it was established.

Mr. NELSON. Yes, sir.

Senator JORDAN. Now, we are coming to the new use at a different time, not using dump power specifically, and yet you expect to maintain the same rate.

Mr. NELSON. We certainly do for irrigation pumping, sir.

Senator JORDAN. Well, insofar as you can separate the additional costs for recreation, you still expect to do it at a half a mill?

Mr. DOMINY. That is right, and, of course, if we are making it nonreimbursable and a burden on the general taxpayer, we certainly think we ought to keep that same rate since it is still primarily for irrigation. We are just changing the timing here rather than the amount of water.

Senator JORDAN. But I think we ought to be realistic and price it at what the actual cost is under the new arrangement.

Mr. DOMINY. Well, it is still not below actual cost. We are generating power at Grand Coulee from the noninterest bearing portion of that project which is irrigation, at five-tenths of a mill.

Senator MOSS. Well, is it not really dump power that you are using at that time?

Mr. DOMINY. Off peak at least.

Senator MOSS. Except you start pumping earlier?

Mr. DOMINY. It is off peak, a lot would be for dumping purposes.

Senator JACKSON. We call it secondary power.

Mr. DOMINY. Secondary power. We call it off peak.

Senator JACKSON. This is a point we are getting into more and more, and that is, that there is a growing market for secondary power.

Senator JORDAN. That was the justification for the intertie.

Mr. DOMINY. That is right.

Senator JACKSON. But if this were a large block it would be something else. I think Mr. Dominy points out it is simply a continuation of the movement of water to support the Columbia Basin project. The added cost stems from the fact that you start in in March instead of in April each year that you can do this. You will not be able to do it in certain years as you have mentioned in your statement.

Mr. DOMINY. And if you cannot do it, there will be no added costs.

Senator JACKSON. What is going to be the cost of the peaking power when the third powerhouse is in? I think it is quite dramatic.

Mr. NELSON. You are asking the cost of energy from the third powerplant?

Senator JACKSON. Yes. I am just talking about energy now.

Mr. NELSON. Yes. The cost of energy from the third powerplant is actually going to be very comparable to what the cost of energy has been traditionally from Grand Coulee Dam. In other words, you will recall in the authorization hearings of the third powerplant it was brought out that the last Bonneville rate structure which I think averaged about 2 mills would completely pay out the third powerplant and return a surplus of about \$250 million during the pay-out period. So I am guessing on that basis when the average Bonneville cost was about 1.67 mills, that that is probably pretty close to what the cost of third powerplant energy would be.

Senator JACKSON. Of course, thanks to American industry, we are going to be able to double the projected output in terms of peaking power. In other words, we will go from the projected figure, which was 3,600,000, as I recollect it, and that will now be doubled because the generators will go from 300,000 to 600,000 now.

Mr. DOMINY. Yes. Ultimately we hope—

Senator JACKSON. Ultimately. I mean there is the projected plan, so that we will have 7.2 million kilowatts in added peaking capacity, bringing the total of the dam to 9.2 million kilowatts in the 1990's. In 1992 or 1993.

Mr. DOMINY. That is correct. We have at the Grand Coulee Dam a tremendous potential for energy production.

Senator JACKSON. Which will be more power output than all the Federal dams currently in operation on the Columbia River.

Senator JORDAN. Mr. Chairman, may I go back to Mr. Dominy's statement—

Senator JACKSON. Yes, certainly.

Senator JORDAN (continuing). On a project which I approve but I am still confused, Mr. Dominy. On page 4, at the top of the page, you say: "higher water levels would add materially to the operating costs of the project, largely because it would be necessary to use firm power for spring and fall pumping." But you still charge it off to recreation at a low grade secondary power rate of a half mill a kilowatt hour; is that not right?

Mr. DOMINY. I think my statement is misleading. If we were to hold Banks Lake at maximum level all of the time it would require firm power and we cannot do that. We have said that. We cannot hold it clear full all the time and not allow any fluctuation at all, but we can minimize the fluctuation as proposed here without using so-called firm power. That is the confusing thing about the way my statement is written.

Senator JACKSON. So what you are really talking about, at the top of page 4, first paragraph, then, is a situation in which the request would be to maintain the lake at a constant high level?

Mr. DOMINY. Yes. Bring it up and keep it there 12 months, and we just cannot do that. That is what we really would like, obviously. This is a real desirable lake if you could do that.

Senator JACKSON. What you are trying to do is take care of the maximum recreational period, which is from the 1st of May to Labor Day.

Mr. DOMINY. Right.

Senator JORDAN. And you are going to do it with low-grade secondary power?

Mr. DOMINY. Yes, sir.

Senator ALLOTT. But not dump power?

Mr. DOMINY. Well, that is a term that—I do not know whether low grade secondary is sometimes called dump power or not but it is power that is generally not salable.

Senator JACKSON. We are still dumping some because we do not have the intertie in operation.

Senator ALLOTT. Well, it is not dump power. Let me ask this question: If this plan should be implemented, what effect would it have on the blue curve on the Franklin D. Roosevelt Lake elevations?

Mr. DOMINY. Well, it would not change the total fluctuation at Franklin D. Roosevelt Lake. We would start pulling it down a little quicker, is all. It would not start to fill quite as fast. We would start pumping during the low part of the year. Just about the time the spring melt comes is when we would start to pump under this plan.

Senator ALLOTT. Well, it would be bound to if you move up the pumping a month. I do not know how much it would change that blue line; but how much would it change it?

Mr. DOMINY. Well, very little because we are talking about 350,000 acre-feet as compared to a capacity of 10 million in Franklin Roosevelt Lake.

Senator ALLOTT. So roughly one-thirtieth?

Mr. DOMINY. It might bring that critical low down another two or three inches.

Senator JACKSON. Your ability to regulate the water will improve substantially with the completion of the storage projects in Canada under the treaty.

Mr. DOMINY. That is correct.

Senator JACKSON. Plus the Libby dam to be built in Montana.

Mr. DOMINY. This is correct. And I also think that ultimately if we put the rest of the pumps in the Grand Coulee pumping plant for Banks Lake pumping, make them reversible, that maybe we can take care of this problem a little simpler in the future, too, because we can use it for pump storage, for peaking purposes, and help Bonneville at some critical times, pump off hours and—

Senator JACKSON. This would improve the economics then.

Mr. DOMINY. Right.

Senator JACKSON. And maximize the best use of your water by having it at the right place at the right time.

Mr. DOMINY. Right.

Senator JACKSON. The concept of pump storage projects is becoming a more and more helpful device to take care of contingencies.

Mr. DOMINY. This is correct. And we plan on using reversible pump turbines in the next pumps that we put in there.

Senator MOSS. Actually you would move the same amount of water except you would move it at an earlier time.

Mr. DOMINY. That is right.

Senator JACKSON. Well, it is worth more at different times is what it really boils down to.

Any further questions?

Senator HATFIELD. No questions.

Senator ALLOTT. Actually, you would not move the same amount of water. You would be moving more water.

Mr. DOMINY. A little more because of extra evaporation and a little more seepage loss with extra quantities of water but no more as far as irrigation use is concerned other than the extra evaporation and a little extra seepage.

Senator JACKSON. You do not have too much evaporation over there, do you, during that period?

Mr. DOMINY. Well, I imagine the average in that area runs about 4 feet a year off any surface of water. And, of course, the higher the surface, the more exposed surface. The little amount of increased evaporation would be just for the increased exposed surface for a little longer, that is all.

Senator JACKSON. The surface of the water is rather limited compared to the acre-feet involved in Banks Lake.

Mr. DOMINY. That is true.

Senator JACKSON. It is not spread over a large area.

Mr. DOMINY. It is fairly narrow and deep, that is right, so we have less total evaporation than you would on a flatter, wider expansion of the same quantity of water, the same quantity spread into a larger bowl.

Senator ALLOTT. The comparable dam would be the John Martin Dam in southeastern Colorado, which is 7 miles long and which has 645,000 acre-feet, compared with this of 700,000 acre-feet, but this is 27 miles long, four times as long as that dam.

Senator JACKSON. What is the width of the lake at John Martin?

Senator ALLOTT. At the widest part, very widest part, approaching the dam, a half mile, less than a half mile. So you have four times the length, so you have basically the same surface area anyway. Evaporation, to a great extent, is one of the major factors as the surface area increases.

Mr. DOMINY. That is right.

Senator JACKSON. Any further questions? Thank you, gentlemen. We appreciate having your comments.

I have received some communications from the area and also a fish report on the catch at Banks Lake. Without objection they will be included in the hearing record.

(The communications referred to follow:)

GRANT COUNTY PORT DISTRICT No. 4,
Coulee City, Wash., February 23, 1967.

Hon. HENRY M. JACKSON,
U.S. Senator,
Washington, D.C.

DEAR SENATOR JACKSON: Grant County Port District No. 4 has embarked on a \$275,000.00 project which will, when completed, provide recreational facilities, camp sites, boat moorages, golf course, rest rooms etc, for tourists and citizens of this state. Our project is located on the south end of Banks Lake and ties in with the present Coulee City Park.

Before we can proceed further, in this project, it is necessary that the level of Banks lake be stabilized.

Senate bill 605, which you introduced, is a must as far as this community is concerned, and until it becomes law we are up against a dead end.

In the past we have had several years of draw down, when pumping was held to a minimum by the Bureau of Reclamation, water became very scarce, our city docks were left high and dry, we had no water in the swimming area, this resulted in no patronage at the park. This patronage is very important to the economy of Coulee City, in fact during the time of the last draw down, we were unable to launch boats and use our ramps from early spring until mid-July, the merchants suffered a loss of some \$20,000. This was income received from campers and users of our park.

It is very discouraging for people from the coast to drive 200 miles, to Coulee City, intent upon using Banks Lake and then find they cannot get to the water.

Senate bill 605 is a small price to pay when you consider the tremendous recreational results created when Banks Lake is at a useable level. With the third power house being constructed at Coulee Dam we certainly will be at wits end to provide recreational facilities for the influx of workers and their families. Banks Lake is our greatest asset, when full, and should be fully utilized.

Our sincere thanks to you, Senator, for your interest in this problem.

Respectfully,

CHARLES W. CONNER,
President.

STATE OF WASHINGTON, THE DEPARTMENT OF GAME

INFORMATION ON BANKS LAKE

1. From the 1965 catch survey we conducted on Banks Lake, the following would probably be helpful:

- a. 29,100 total fisherman days use
- b. total catch of 65,000 fish of all species, average over 2 fish per man per trip
- c. 20,000 rainbow trout harvested, at an average weight of 1 lb., or 20,000 lb. Our average plant is from 100,000 to 150,000 rainbow, or some 10,000 lb. This shows a return of 2 lb. of fish to every lb. we plant.

Experiments conducted in 1965 & 1966 by marking various sized plants indicate that we can increase the efficiency of returns, very conceivably we can harvest 4 lb. for every lb. planted.

Returns as of end of 1966 from marked plants: (occurring in creel checks)

8-22-64 plant of 25,000 at 25/lb.....	141
9-21-64 plant of 25,000 at 10/lb.....	100

These figures are of course no indication whatsoever of *total* number of each release caught, but only a comparison of numbers of returns from each group actually checked.

2. A summary of fish checks during 1966 indicates that the total catch was probably in excess of the 1965 catch.

3. Our future plants of rainbow will depend a great deal on the extent of returns to the fisherman. This in turn depends on ease of access and boat launching. A constant high water level will greatly enhance opportunity to harvest these fish.

4. A project that stabilization of Banks at a reasonably high level would make possible is development of the Osborne Bay Lake area into a trout fishery. This would involve over 250 acres of excellent trout water, which could be isolated from the main lake in a manner compatible with B of R operation. However the expenditure necessary to do this would not be justified unless Banks was held at a level of 1565 or more. Such a project could well result in a harvest of 75,000

more rainbow trout, an increase of some 13,000 man-days fishing. This would not detract from the usage of the main body of Banks Lake.

5. Possible development at Banks camp area for access would be enhanced by higher constant level.

SUMMARY OF 1965 BANKS LAKE FISHING PRESSURE AND CATCH ESTIMATE SURVEY

BY MERRILL SPENCE, FISH BIOLOGIST

This survey was conducted on sixteen week-end days and twenty-six week days throughout the year. On each day, the total number of fisherman cars were tallied, and creel checks were recorded from as many fishermen as possible after their fishing day was complete. Each day an average fisherman per car figure was calculated to arrive at the total estimated number of fishermen. Boat fishermen were recorded separately from shore fishermen whenever possible both in catch records and car counts, except during January and February when most of the fishing was done through the ice. The information was grouped into two month periods, summarized in the following table.

	Estimated fisherman-days use	Rainbow	Kokanee	Perch	Ling	Walleye	Bass	Whitefish
January and February.....	2,500			7,500	750			
March and April.....	7,270	9,000	2,700	3,700				200
May and June.....	5,890	5,890	6,300	4,220			670	
July and August.....	4,560	1,230	5,090	1,400		200	200	
September and October.....	3,700	2,220	3,480	1,700				
November and December.....	1,800	1,830	60	4,970	2,500			
Total.....	29,100	20,170	17,630	23,560	3,250	200	870	200
Average catch.....		0.7	0.6	0.8				

A total of 849 fishermen were actually checked during the year, an average of 23% of the total fishing on each survey day. The total of 42 survey days represents 11% of the entire year.

Rainbow trout, kokanee, and perch figures are the only ones considered to be reasonable estimates. Regular surveys were not carried on during the night when a large percentage of the ling are taken. The great majority of ling are caught during the November-February period, as noted in the table. Most of the largemouth bass are taken during May and June. In addition to the species listed, some crappie were caught, but none recorded.

Of the total fisherman day estimate, 71% (20,661) used boats and 29% (8,439) fished from shore.

As creel records were taken, lengths of the rainbow trout were listed. On the basis of data from past marking experiments, it was found that the 1965 catch was composed of 80% less than two years old and 20% over two years. The lengths varied from 8 to 23 inches, and averaged 14 inches. Using a conservative figure of one pound average per fish, the year's rainbow catch represents approximately 20,000 pounds. The majority of these fish were released in 1962 (60,700), 1963 (167,000) and 1964 (105,400).

These plants represent a total of 31,300 pounds, or an average yearly release of 10,400 pounds. This indicates a return of two pounds for each pound released. On the basis of an average plant for 1962-1964 of 111,000 rainbow, the 20,170 estimated catch represents a return of 18% in 1965.

WASHINGTON STATE PARKS & RECREATION COMMISSION,
Olympia, Wash., February 23, 1967.

Senator HENRY JACKSON,
U.S. Senate,
Old Senate Building,
Washington, D.C.

DEAR SENATOR JACKSON: It is my understanding that the legislation which you have introduced would stabilize the level of Banks Lake. I should like to

state that we have been and are constructing parks on this lake and would support any action you might take with regard to said stabilization.

Sincerely,

CHARLES H. ODEGAARD, *Director.*

TOWN OF COULEE CITY,
Coulee City, Wash., February 23, 1967.

HON. HENRY M. JACKSON,
U.S. Senate Building, Washington, D.C.

DEAR SENATOR JACKSON: We are writing to you with reference to Senate Bill 605, and are listing some of the reasons why we are interested in its passage.

The Town has during the past several years spent around \$25,000.00 in improving the park site and boat launching sites on the South end of Banks Lake. The local Port District have also spent a considerable sum.

And of course there has been a lot of improvements made on the North end of the lake. The State Game Department and others have quite an investment along the east side of the lake.

Needless to tell you that serious fluctuation raises havoc with our boat launching sites, and this in turn adversely effects the recreational and tourist business, which means a good deal to us.

We hope that you are successful in getting this bill passed.

Sincerely yours,

RAS TANNABERG, *Mayor.*

COULEE CITY CHAMBER OF COMMERCE,
Coulee City, Wash., February 17, 1967.

Senator HENRY M. JACKSON,
*Senate Office Building,
Washington, D.C.*

DEAR SENATOR JACKSON: Your correspondence concerning the proposed legislation stabilizing the water level of Banks Lake is greatly appreciated. We wholeheartedly support your efforts on Senate Bill #605, vital and necessary legislation for this area.

The facts and income figures have been furnished your office in the past and I am sure are still available for your use at the open hearing for this bill, February 23. We are however, enclosing a picture and story from a recent issue of the Fishing and Hunting News which shows that the lake is being used for purposes other than it's original plan and that there are many benefits to be derived from this bill.

Thank you very much for your interest in this area.

Sincerely yours,

ROBERT EVANS,
Acting Secretary.

[From Fishing & Hunting News, Feb. 18, 1967]

BANKS LAKE, 27,000 ACRE POND, REMAINS OPEN YEAR-ROUND

Banks Lake or the "Equalizer," as old-timers call it, is a giant 27,000 acre pond into which is pumped Columbia River water. It stretches from Coulee City to Grand Coulee Dam, a distance of approximately 27 miles.

This reservoir was made by constructing a pair of earth-fill dams at opposite ends of the Grand Coulee, a channel through which the Columbia once flowed. At the south end is Dry Falls Dam. It's so named because once the Columbia plunged over a giant falls that would dwarf Niagara. Upper end of the reservoir, north end, is held by the North Dam which is just out of Grand Coulee.

For the fisherman, attraction here is year-round fishing, especially during the winter when other waters are closed.

Many sportsmen ask about the best time to fish Banks. So far no one has found any best time. Trout (rainbows), perch, crappie, silvers, bass and ling cod take turns hitting all year-round. Perch are best in late fall and as the ice goes out. Silvers hit like crazy during the summer's heat.

Rainbows are active in the spring and when the temperature cools in the fall but will hit year-round. Ling cod are hitting now, some weigh to 16 pounds.

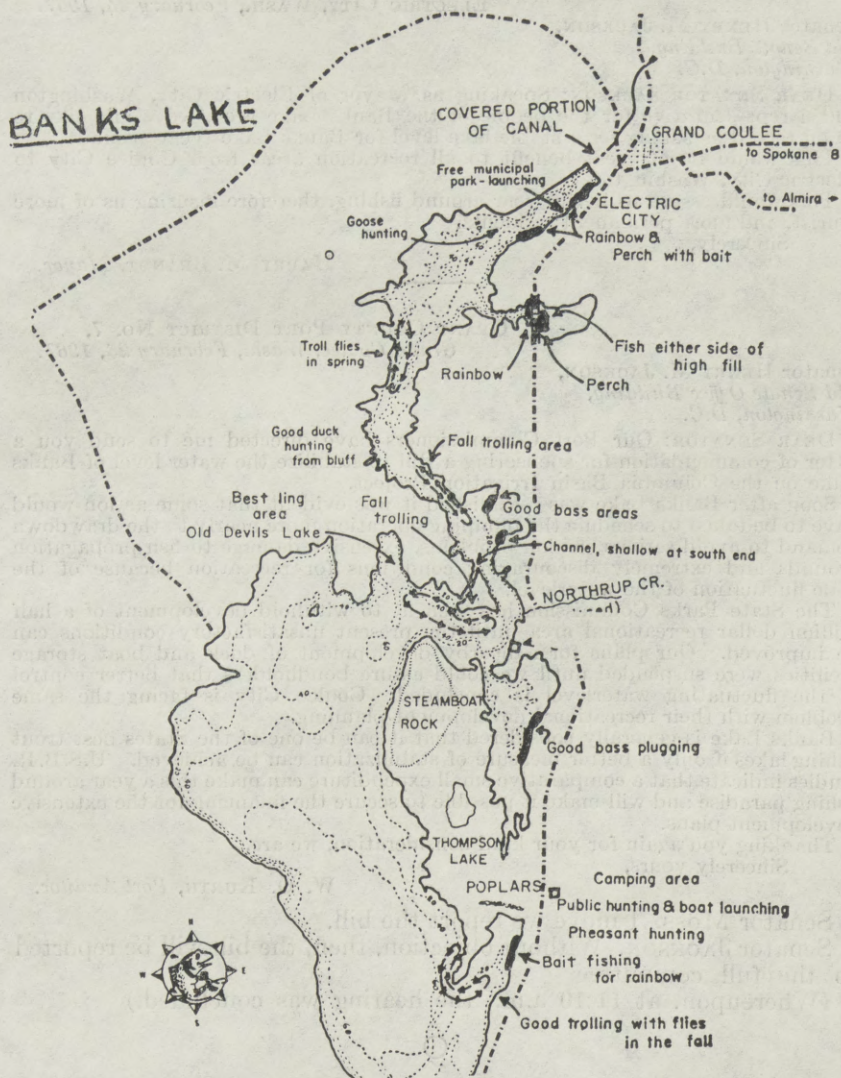
While the water has been open most of the time this year, ice occasionally forms on Banks. This signals the beginning of dandy ice fishing and often ice fishermen take a great variety of fish in January and February.

Banks Lake sits in a natural wind tunnel and is subject to high winds and accompanying violent waves. Boats of 20 feet in length are not out of place.

Winter anglers seem to congregate at Steamboat Rock. Steamboat Rock is an unmistakable basal landmark that does look like an old stern-wheel river boat. It is located about one-third of the way down the equalizer from Grand Coulee Dam. Perch, rainbow and ling cod bite here. Anglers can boat the water or fish it from the bank and if temperatures drop, ice fishing is also good here.

There is an access area at Steamboat Rock and anglers can launch their boats there.

Highway runs alongside the reservoir from Coulee City to Grand Coulee so anglers can come from either direction.



COULEE CITY CHAMBER OF COMMERCE,
Coulee City, Wash., January 31, 1967.

Senator HENRY M. JACKSON,
*U.S. Senate,
 Washington D.C.*

DEAR MR. JACKSON: The Coulee City Chamber of Commerce wishes to express its support of the stabilization of the water level in Banks Lake.

It is their opinion that stabilization would enhance the recreational facilities in this area and would benefit many sportsmen and nature lovers of the state, as well as improving the business climate for a number of motels, resorts, service stations, and other service-type businesses.

Respectfully yours,

 DONALD K. GORDON, *Clerk.*

ELECTRIC CITY, WASH., *February 24, 1967.*

Senator HENRY M. JACKSON,
*Old Senate Building,
 Washington, D.C.*

DEAR SENATOR JACKSON: Speaking as Mayor of Electric City, Washington and a representative for the people of the Banks Lake area, we would like to go on record as asking for a stable lake level for Banks Lake (year around).

This would be of great benefit to all recreation areas from Coulee City to Electric City, Washington.

This would assure us better year around fishing, therefore insuring us of more tourist, and more permanent residents.

Sincerely,

 HARRY M. BRANDT, *Mayor.*

GRANT COUNTY PORT DISTRICT No. 7,
Grand Coulee, Wash., February 23, 1967.

Senator HENRY M. JACKSON,
*Old Senate Office Building,
 Washington, D.C.*

DEAR SENATOR: Our Port Commissioners have directed me to send you a letter of commendation for sponsoring a Bill to stabilize the water level of Banks Lake on the Columbia Basin Irrigation Project.

Soon after Banks Lake was established it was evident that some action would have to be taken to schedule the pumping operation more nearly to the drawdown demand to avoid serious erosion problems, extensive damage to fish propagation grounds and extremely discouraging conditions for recreation because of the wide fluctuation of the waterlevel.

The State Parks Commission has seen fit to withhold development of a half million dollar recreational area until the present unsatisfactory conditions can be improved. Our plans for a nearby development of dock and boat storage facilities were suspended until we could assure bondholders that better control of the fluctuating waterlevel is concluded. Coulee City is facing the same problem with their recreational development planning.

Banks Lake is generally considered that it can be one of the States best trout fishing lakes if only a better measure of stabilization can be achieved. U.S.B.R. studies indicate that a comparative small expenditure can make this a year around fishing paradise and will make it possible to secure the financing for the extensive development plans.

Thanking you again for your kind consideration, we are,

Sincerely yours,

 W. O. KURTH, *Port Auditor.*

Senator Moss. I move we report the bill.

Senator JACKSON. Without objection, then, the bill will be reported to the full committee.

(Whereupon, at 11:10 a.m., the hearing was concluded.)

